

REMARKS

RESPONSE

The Present Amendment is submitted in response to the Office Action mailed May 14, 2009.

NOTICE OF APPEAL

A Notice of Appeal from the examiner to the Board of Patent Appeals and Interferences was filed November 13, 2009.

PETITION FOR EXTENSION OF TIME

A Petition for an Extension of Time for Five (5) Months from January 13, 2010 to and including June 13, 2010 is submitted herewith, together with the requisite extension fee.

REQUEST FOR CONTINUED EXAMINATION (RCE)

A Request for Continued Examination (RCE) is also submitted herewith, together with the requisite fee.

In addition, the RCE includes a Request for Suspension of Action on the above-identified application under 37 CFR §1.103(c) for a period of three months in order to enable the applicant to provide additional information and data regarding the features of the present invention as compared to the prior art references cited in the outstanding Office Action.

THE CLAIM REJECTIONS UNDER 35 USC§103

In the Office Action, Claims 1, 6, 7, 9, 10, 13, 20-24 and 26 were rejected under 35 USC§103(a) over US patent no. 4,233,922 to Conway in view of US patent no. 5,398,629 to Wasenius.

The claims have been amended in a manner which is believed to further clarify the present invention, and in particular to better distinguish the present invention over the US patent no. 4,233,922 to Conway and US patent no. 5,398,629 to Wasenius. In particular, the present invention relates to a marine vessel having a plurality of separate liquid cargo tanks located below the deck plate, the tanks having a generally highest point above the baseline of the vessel, at least a portion of the deck plate being located above each tank and each tank having a highest point available above the baseline of the vessel. The improvement comprises a plurality of apertures in the deck plate communicating with the respective tank therebelow, the plurality of apertures being positioned proximate the highest point of the tank above the baseline of the vessel. At least one separate and individual expansion trunk is positioned on the deck plate and over the apertures, the trunk having an interior volume of at least 2% of the total capacity of the tank, and being between about 10 to 40 meters in length, about 5 to 15 meters wide, and about 2 to 3 meters high. The trunk is located directly above the respective tank therebelow and as far forward as possible with respect to the tank. The trunk is secured in a fluid-tight relation with the deck plate and surrounding the plurality of apertures in the deck plate above each respective tank to prevent leakage therebetween, to form an exclusive expansion space to serve the liquid cargo in the respective tank therebelow.

The expansion trunk is in fluid communication with the venting system used for the venting of the tank.

Claim 1 has been amended to recite the fact that the plurality of apertures are positioned “proximate” the highest point of the tank above the baseline of the vessel, the baseline being the point under the keel, or center vertical keel (CVK), i.e., the highest point being the top of the deck plate of the ship.

In addition, Claim 1 has been amended to recite the fact that the trunk of the present invention has an interior volume of at least 2% of the “total capacity of the tank”. Finally, Claim 1 has been amended to recite the fact that the expansion trunk is in full communication with “the venting system used for the venting of the tank”.

It is respectfully submitted that Claim 1 as amended herein distinguishes the present invention patentably over the Conway and Wasenius patents, considered individually or in combination, in whole or in part.

In the Office Action, it was stated that the combination of Conway and Wasenius does not disclose that the slots have a sufficient area such that there is approximately less than a 0.5 pound per square inch pressure difference between the opposing tank side and trunk side of the deck plates when the tank is being loaded at 200% of its maximum load, i.e., as determined by the pump, venting, and terminal restriction systems of the vessel. It was also stated that Conway and Wasenius do not disclose that the trunk has an interior volume of at least 2% of the volume of the respective tank therebelow for liquid cargo storage, and that the apertures are located as far aft on the tank as is possible. Moreover, it was stated in the Office Action

that Conway and Wasenius do not disclose that the trunk has dimensions of between about 10 and 40 meters in length, about 5 and 15 meters in width and about 2 and 3 meters in height, and that the trunk encloses a volume at least that required for compliance with maritime regulations for an expansion space for liquid cargo storage. Finally, it was also stated that the combination of Conway and Wasenius does not disclose that the expansion space of each trunk for fluid cargo storage is at least about 2% of the amount of under deck space for use as fluid cargo storage, and that the slots are at least one-half the length of the deck plate.

In the Office Action it was stated that it would have been obvious at the time of the invention was made to a person having ordinary skill in the art to which the subject matter pertains to modify the trunks and apertures with slots of the combination of Conway and Wasenius such that slots have a sufficient area such that there is approximately less than a 0.5 pound per square inch pressure difference between the opposing tank side and trunk side of the deck plates when the tank is being loaded at 200% of its maximum load (i.e., as determined by the pump, venting and terminal restriction systems of the vessel). It was also stated that it would (allegedly) be obvious to one skilled in the art, that the slots are between 2 and 3 centimeters wide and one-half the length of a deck plate, and that the trunk has an interior volume of at least 2% of the volume of the respective tank therebelow for liquid cargo storage, and that the apertures are located as far aft on the tank as is possible, and that the trunk has dimensions of between about 10 and 40 meters in length, about 5 and 15 meters in width and about 2 and 3 meters in height, and that the trunk encloses a volume at least that required for compliance with maritime regulations for an expansion space for liquid cargo storage.

Finally, it was stated that it would be obvious to one skilled in the art that the expansion space of each trunk for fluid cargo storage is at least about 2% of the amount of under deck space for use as fluid cargo storage, and that the slots are at least one-half the length of the deck plate.

In the Office Action it was stated that motivation to make these modifications are found in the fact that the apertures and trunk are allegedly going to be made with a dimension and volume to meet requirements specified by a governing body so that the vessel can be used for what it is intended.

It is respectfully submitted that the relevant combination of features as recited in the claims of the present application, particularly as amended herein, are clearly unobvious to persons skilled in the art and that to maintain that these features are obvious is to prejudice the inventors with their own disclosure. In particular, neither Conway nor Wasenius disclose or even suggest the combination of features as recited in the claims therein, particularly as amended herein.

In this regard, the present Amendment is being filed with a view toward obtaining a Declaration Under 35 USC§1.132 of at least one of the inventors who is an expert in the particular art of the present application. In particular it is intended to obtain and document statements from the inventor with regard to the issues of alleged obviousness and design choice as cited in the Office Action.

Independent Claim 9 has been amended to recite the fact that each trunk has an interior volume of at least 2% of the total capacity of the tank, and to specify the meaning of the

expression “maximum load rate,” as being determined by the pump, venting, and terminal restriction systems of the vessel.

Independent Claim 21 has been amended similar to independent Claim 9 as recited hereinabove.

Independent Claim 24 has been amended to better clarify the recitation of the apertures as being positioned proximate the highest point of the tank above the baseline of the vessel, and to better define the expansion trunk as being in fluid communication with the venting system which is normally used for the venting of the tank.

Independent Claim 26 has been amended to further define the expansion trunk as being in fluid communication with the venting system used for the venting of the tank. Additionally, this claim has been amended to define the “maximum load rate” as being the load rate as determined by the pump, venting, and terminal restriction systems of the vessel.

It is respectfully submitted that the claims of the present application as intended herein, fully distinguish the present invention patentably over the prior art of record, particularly the Conway and Wasenius patents.

Reconsideration of the claims as amended herein is respectfully requested.

REQUEST FOR SUSPENSION OF EXAMINATION

As indicated hereinabove, a Request for Suspension of Examination of the above-identified application for a period of three (3) months is being filed concurrently herewith, along with a Request for Continued Examination (RCE). It is intended that the present Amendment will be supplemented by additional information and arguments within the three (3) month period of

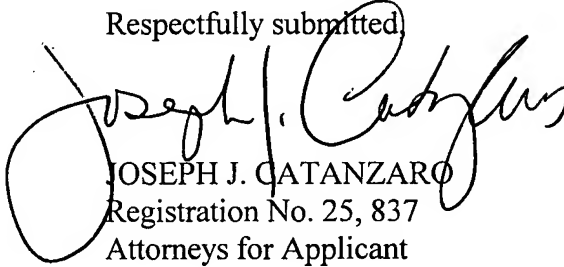
suspension

Reconsideration of the claims is respectfully requested.

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Please charge any additional fee(s) and credit any overpayments to deposit account no.
01-0035.

Respectfully submitted,



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